



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/589,526	06/07/2000	Keiji Usuba	16869P-008300US	1152

20350 7590 06/17/2003

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

SINGH, DALZID E

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 06/17/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/589,526

Applicant(s)

USUBA ET AL.

Examiner

Dalzid Singh

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10 is/are allowed.
- 6) ☒ Claim(s) 11-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4. 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 15 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 15, applicant claims "...isolation instruction information further comprises an indication of a no signal condition caused by stopping the transmission of said optical transmitter." It is unclear what is meant by *no signal condition*. Does the applicant mean, loss of signal (LOS) is transmitted by failure of the transmitter?

In claim 22, applicant claims "...isolation instruction information further comprises in no signal condition caused by stopping the transmission of said optical transmitter." It is unclear what is meant by *no signal condition*. Does the applicant mean, loss of signal (LOS) is transmitted by failure of the transmitter?

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 17, 19-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kremer (US Patent No. 5,406,401).

Regarding claim 17, Kremer discloses network transmission system, shown in Fig. 1, comprising:

a plurality of nodes (nodes 101-104), wherein upon a fault condition in which obstacles (i.e., failure) have occurred in more than one group in at least one of said plurality of nodes, said node suffering said fault condition isolates itself from others of said plurality of nodes in said network transmission system (see col. 7, lines 67-68 to col. 8, lines 1-12, Kremer discloses isolation (squenching) of the node in the event of failure).

Regarding claims 19 and 21, Kremer discloses that the isolation instruction information (i.e., switching request) further comprises said overhead indicating that said synchronous multiplex signals to be received are in a signal obstacle condition (failure signal), see col. 3, lines 3-20, lines 53-68 and col. 4, lines 41-64, where Kremer discloses overhead signals requesting and acknowledging failure signal.

Regarding claim 20, Kremer discloses that the isolation instruction information further comprises said overhead instructing a ring switch transmitting, upon reception, the received synchronous multiplex signals (see col. 3, lines 3-20, lines 53-68 and col. 4, lines 41-64).

Regarding claim 22, (as far as understood), Kremer discloses that the isolation instruction information further comprises in no signal condition caused by stopping the

transmission of said optical transmitter (as discussed above and in col. 4, lines 1-2 Kremer discloses LOS of signal which is transmitted in event of fault occurrence).

Regarding claims 23 and 25, Kremer discloses that upon occurrence of said obstacle (i.e., failure) prepares as said isolation instruction of the following:

said isolation instruction information is said overhead indicating that said received synchronous multiplex signals are both in signal obstacle conditions (as discussed above in claim 19-21, Kremer disclose isolation instruction (i.e., switching instruction) of the obstacle condition (failure condition)).

Regarding claim 24, Kremer disclose network transmission system, shown in Fig. 1, comprising:

preparing isolation information (i.e., switching information) into an instruction signal according to said plurality of substantially contemporaneous faults (Kremer discloses request and acknowledgement for switching action, see col. 3, lines 1-20);

providing said isolation information to at least one of a plurality of adjacent network nodes (see col. 3, lines 1-20, the overhead signal containing isolation (switching) instruction is transmitted within the network comprising of nodes, see Fig. 1); and

switching said transmission lines based upon said instruction signal so that said synchronous multiplex signals may be transmitted to either of said transmission lines properly (see col. 4, lines 41-64).

Regarding claim 26, Kremer discloses that the network further comprises a SONET network (see col. 2, lines 57-59).

Regarding claim 27, Kremer discloses that the SONET network is a 2 fiber BLSR network (see Fig. 1, Kremer shows two fibers network).

Regarding claim 28, Kremer discloses that the SONET network is a 4 fiber BLSR network (see col. 1, lines 58-60).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kremer (US Patent No. 5,406,401) in view of Bala et al (US Patent No. 6,272,154).

Regarding claims 11 and 18, Kremer discloses network transmission system, shown in Fig. 1, comprising:

transmitters and receivers (Fig. 2 shows signal coming into the node and signal going out of the node, therefore there must be transmitter and receiver in the node to transmit and receive the signal);

cross connect unit (i.e., switch) which switches the output signal (see col. 3, lines 35-65);

equipment supervision unit (since fault is monitored, therefore there must be an equipment supervision unit to monitor condition of the lines); and

wherein upon a fault condition in which obstacles (i.e., failure) have occurred in more than one group in at least one of said plurality of nodes, said node suffering said fault condition isolates itself from others of said plurality of nodes in said network transmission system (see col. 7, lines 67-68 to col. 8, lines 1-12, Kremer discloses isolation (squelching) of the node in the event of failure).

Kremer differ from this claim in that Kremer does not specifically disclose clock unit that supplies clock to the cross connect unit. However, Bala et al teach the use of clock for the cross connect unit (see col. 16, lines 52-55 and col. 18, lines 4-9). Since it is well known to use clock unit for cross connect, as evidenced by Bala et al, therefore it would have been obvious to provide clock unit for the cross connect of Kremer in order to control timing of the cross connect. The motivation of providing clock unit to the cross connect is to provide an accurate regulation of switching data signal to a different transmission lines.

Regarding claims 12 and 14, Kremer discloses that the isolation instruction information (i.e., switching request) further comprises said overhead indicating that said synchronous multiplex signals to be received are in a signal obstacle condition (failure signal), see col. 3, lines 3-20, lines 53-68 and col. 4, lines 41-64, where Kremer discloses overhead signals requesting and acknowledging failure signal.

Regarding claim 13, Kremer discloses that the isolation instruction information further comprises said overhead instructing a ring switch transmitting, upon reception, the received synchronous multiplex signals (see col. 3, lines 3-20, lines 53-68 and col. 4, lines 41-64).

Regarding claim 15, (as far as understood), Kremer discloses that the isolation instruction information further comprises in no signal condition caused by stopping the transmission of said optical transmitter (as discussed above and in col. 4, lines 1-2 Kremer discloses LOS of signal which is transmitted in event of fault occurrence).

Regarding claim 16, Kremer discloses that upon occurrence of said obstacle (i.e., failure) prepares as said isolation instruction of the following:

said isolation instruction information is said overhead indicating that said received synchronous multiplex signals are both in signal obstacle conditions (as discussed above in claim 19-21, Kremer disclose isolation instruction (i.e., switching instruction) of the obstacle condition (failure condition)).

Allowable Subject Matter

7. Claims 1-10 are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter:

The instant application is directed to a nonobvious improvement over the invention described in patent no. 5,406,401 to Kremer. The improvement comprises:

a cross connect unit that divides and multiplexes said payload inputted from said overhead processing unit, switches output routes of said payload for transmission to either of said transmission lines, and outputs to the overhead processing unit again,
a clock unit that supplies a clock to at least said cross connect unit,

an equipment supervision unit that supervises at least said cross connect unit and said clock unit and outputs an instruction signal based upon the result of the supervision,

a switching control unit that controls switching of the transmission lines so that, being based upon said instruction signal and said overhead, said cross connect unit, said overhead processing unit and said optical transmitter, said synchronous multiplex signals may be transmitted to either of said transmission lines properly; and wherein

upon said equipment supervising unit detecting a condition in which obstacles have occurred in more than one group in at least either of said cross connect unit and said clock unit, said equipment supervision unit inserts information about said obstacles in said instruction signal, and said switching control unit into which said instruction signal is inputted enables said overhead processing unit and the optical transmitter to output isolation instruction information to said transmission line. This patentable distinction is included in claim 1.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shiragaki (US Patent No. 5,663,820) is cited to show optical network using multiplexed payload and OAM signals.

Goto (US Patent No. 5,737,310) is cited to show synchronous ring network system.

Barnsley et al (US Patent No. 5,864,414) is cited to show WDM network with control wavelength.

Flanagan et al (US Patent No. 5,933,258) is cited to show optical communication system.

Merli et al (US Patent No. 6,088,141) is cited to show self-healing network.

Shiragaki et al (US Patent No. 6,125,104) is cited to show network node for switching quality detector to incoming signal specified by request message from adjacent node.

Asahi (US Patent No. 6,222,653) is cited to show optical communication node and wavelength division multiplexing optical transmission device having ring structure comprising optical communication nodes.

Taniguchi (US Patent No. 6,456,587) is cited to show ring transmission system and squelch method used for same.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is 703-306-5619. The examiner can normally be reached on Mon-Fri 8am - 4pm.

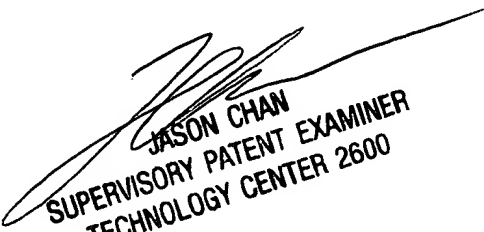
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Art Unit: 2633

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

DS

June 14, 2003



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600